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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/677,938	10/01/2003	Ronald P. Brochu	2229	9722

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EXAMINER
MAYO, TARA L

ART UNIT	PAPER NUMBER
3671	

DATE MAILED: 05/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	**Application No.** 10/677,938	**Applicant(s)** BROCHU ET AL.	
	Examiner Tara L. Mayo	**Art Unit** 3671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 February 2006*.
2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22 and 25-33* is/are pending in the application.
4a) Of the above claim(s) *1,2,20-22,25,27,28 and 33* is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *3-19,26 and 29-32* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on *08 October 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a)☐ All b)☐ Some * c)☐ None of:
1.☐ Certified copies of the priority documents have been received.
2.☐ Certified copies of the priority documents have been received in Application No. _____.
3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 07/26/04, 11/21/05, 05/01/06
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Newly submitted claim 33 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: it requires the thickness of the wall to decrease with elevation from the base of the chamber.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 33 withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

2. Applicant amended claims 26 and 29 through 31 in the response filed 13 February 2006 such that the claims are now restricted to Species C outlined in the Election of Species requirement set forth in the Office action mailed 09 September 2005. The claims are herein considered for prosecution on the merits.

Specification

3. The prior objection to the Specification has been overcome by the response filed 13 February 2006.

Claim Objections

4. The prior objection to claim 3 has been overcome by the response filed 13 February 2006.

Claim Rejections - 35 USC § 112

5. The prior rejection of claims 5 through 8 under 35 USC §112, first and second paragraphs is hereby withdrawn in view of section 6 of the Remarks filed 13 February 2006.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 16 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claims 16 and 19, the scope of the claimed invention is rendered indefinite by the recitation of "basic thickness." Specifically, it is unclear what the term "basic" means and at what point on the claimed chamber it is determined.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 3 through 19, 26, 29 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nichols et al. (U.S. Patent No. 4,759,661) in view of Bailey et al. (U.S. Patent No. 3,495,410) and Maestro (U.S. Patent No. 6,612,777).

Nichols et al. '661, as best seen in Figures 1, 3 and 8, shows an arch shape cross section leaching chamber (20) having a base, a top (18) and opposing sidewalls (24, 24') running upwardly from the base to the top comprising:

with regard to claims 3, 26 and 29,

a plurality of perforations (26) in the sidewalls, spaced apart upwardly along the sidewall, the perforations running downwardly from the chamber interior to the chamber exterior;

wherein perforation height varies with elevation from the base (i.e., each slot is at a different height along the sidewall); and

with regard to claim 4,

wherein the opposing sidewalls of the chamber have similar perforation heights and sidewall thicknesses;

with regard to claim 5,

wherein the Soil Threshold Angle (STA), namely the angle between a horizontal line and a straight line running from the top outside edge of a perforation to the bottom inside edge of the perforation, is substantially similar;

with regard to claim 6,

wherein the STA of each perforation is less than the Repose Angle (RA) of the soil (see Figure 9);

with regard to claim 7,

wherein the perforations are horizontal slots (col. 4, line 14);

with regard to claim 9,

wherein the chamber is comprised of peak and valley corrugations having a peak-to-peak pitch of less than about 8 inch (col. 6, lines 16 through 24);

with regard to claim 10,

wherein the perforations (26) are horizontal slots having edge radii at the interior and exterior surfaces of the sidewall portion;

with regard to claim 11,

wherein the slot perforation height at the upper part of the sidewall portion is greater than the slot perforation height at lower part of the sidewall portion;

with regard to claim 12,

wherein the perforation height increases with elevation;

with regard to claim 14,

wherein the perforations are outward flaring slots;

with regard to claim 15,

wherein the chamber is made of thermoplastic (col. 7, line 42) and has a slotted sidewall free of louvers (col. 4, lines 47 through 48) and a length of about 4 feet (col. 6, line 11);

with regard to claim 17,

wherein the perforations are horizontal slots; and

with regard to claim 32,

wherein the perforation height increases with elevation from the base.

Nichols et al. '661 fails to teach:

a sidewall portion running curvingly upwardly from proximity of the base toward the top of the chamber;

the sidewall thickness varying with elevation from the base;

the STA being less than about 26 degrees;

the upper part of the sidewall being thicker than the lower part of sidewall;

the perforation height changing uniformly with elevation;

the density of the thermoplastic being in the range of 0.033 to 0.034 pound per cubic inch, the chamber having an interior volume per foot of length of at least about 1.5 cubic feet per foot, a leaching area to weight ratio of greater than about 100 square inch per pound;

the thickness of the perforated sidewall portion being less than two times greater than the basic thickness of the chamber walls which are not perforated; and the slots being flared inwardly, the exterior opening heights of the slots ranging from about 0.07 to 0.09 inch, the perforated sidewall portion thickness ranging from about 0.12 to 0.19 inch, the basic wall thickness being about 0.09 inch.

Bailey et al. ‘410, as best seen in Figure 7, shows the cross section of a corrugated leaching chamber and expressly teaches a semi-circular shape for effecting a durable structure highly resistant to fracture (col. 2, lines 41 through 49).

Maestro ‘777, as seen in Figures 2 and 5, shows an arch shape cross section corrugated leaching chamber (10) having a base (26), a top, and opposing sidewalls running upwardly from the base to the top, wherein the sidewall thickness may vary to achieve structural reinforcement in specific areas (col. 5, lines 9 through 11).

With regard to claims 3 and 29, it would have been obvious to one having ordinary skill in the art at the time of invention to modify the device taught by Nichols et al. ‘661 such that a portion of the sidewall would run curvingly upwardly as taught by Bailey et al. ‘410. The motivation would have been to make the corrugated chamber more resistant to fracture.

With regard to claims 3, 26 and 29, it would have been obvious to one having ordinary skill in the art at the time of invention to modify the device taught by Nichols et al. ‘661 such that the thickness of the sidewall would vary with elevation from the base as suggested by Maestro ‘777. The motivation would have been to reinforce the chamber as desired between its base and top. With specific regard to claims 10 and 12, one having ordinary skill in the art would make the upper part of the sidewall thicker than the lower part of the sidewall to provide more reinforcement to the upper part of the sidewall relative to the lower part of sidewall. With specific regard to claim 13, one having ordinary skill in the art would choose to vary the thickness in a uniform manner to eliminate any areas of weakness in the chamber design.

With regard to claims 7, 8 and 30, it would have been obvious to one having ordinary skill in the art at the time of invention to make the slots on the device taught by the combination of Nichols et al. '661, Bailey et al. '410 and Maestro '777 with an STA of less than about 26 degrees. The motivation would have been to effectively resist intrusion of a soil type having low cohesion (i.e., a low RA).

With regard to claim 13, it would have been obvious to one having ordinary skill in the art at the time of invention to uniformly vary the height of the slots on the device taught by the combination of Nichols et al. '661, Bailey et al. '410 and Maestro '777 with elevation. The motivation would have been to provide means for uniformly distributing effluent to the surrounding soil.

With regard to claims 15, 16, 18, 19, 29 and 31, Applicant has not shown that the particular dimensions recited in the claims are critical or provide an unexpected result. As such, the limitations are met by the device shown by the combination of Nichols et al. '661, Bailey et al. '410 and Maestro '777 that is capable of being manufactured to the claimed dimensions. *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (fed. Cir. 1990).

With specific regard to claim 18, it would have been obvious to one having ordinary skill in the art of irrigation/drainage at the time of invention to make the slots of the device shown by the combination of Nichols et al. '661, Bailey et al. '410 and Maestro '777 inwardly flaring since the Examiner takes Official Notice of the use of inwardly flaring slots for restricting the entry of soil particles into a leaching chamber.

Response to Arguments

11. Applicant's arguments with respect to claims 3 through 19 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

tlm

08 May 2006

Thomas B. Will
Supervisory Patent Examiner
Group 3600